

Water – The Wisconsin Numbers

In this age of competing for dollars and favorable decisions from your municipal officials, it is important to make statistics work for you. For example, statistics can be very helpful in telling your story when you are trying to win approval of a water main replacement project.

The PSC annual report system collects data from 570 municipal water utilities. Utilities are classified by size, with 68 Class AB utilities defined as having more than 4,000 customers, 156 Class C utilities defined as having between 1,000 and 4,000 customers, and 346 Class D utilities with less than 1,000 customers. The following tables of averages is made up from the pumping statistic page in the annual report.

Unmetered Utility Use, Unmetered Utility Defects, and Unmetered Nonutility Use are categories that account for known uses of water. Many of these uses are estimated when actual consumption is not known. Typical activities found in each category include, but not limited to:

1. **Unmetered Utility Use** – Sewer main flushing, hydrant valve exercising, frozen lateral prevention, water treatment backwashing, water tower cleaning, water office drinking fountain, well maintenance, sedimentation basin cleaning, booster pump cooling, meter test bench, water used for lubrication, water main testing, water quality testing, and main flushing.
2. **Unmetered Utility Defects** – Water and regulated sewer main breaks, defective tank valves, distribution system leaks, customer meter under-registration, design flaws such as recirculated water around meter, tower overflows, and telemetry failure.
3. **Unmetered Nonutility Use** – Fire department training and fires, private fire protection sprinkler tests, vandalism, and theft.

Statistics for an Average Class AB Water Utility (1,000 gallons)

	2001	2002	2003	2004	2005
Water Pumped	2,414,981	2,406,733	2,373,546	2,293,448	2,353,403
Water Sold	2,113,968	2,097,573	2,038,039	1,947,265	2,021,221
Unmetered Utility Use	58,622	55,790	51,117	59,631	59,569
Unmetered Utility Defects	37,043	24,139	20,471	61,635	31,743
Unmetered Nonutility Use	3,036	12,017	10,731	2,800	3,822
Total Non Metered Use	78,135	74,456	70,038	106,598	84,692
Not Metered % of Sold	3.70%	3.55%	3.44%	5.47%	4.19%
Water Loss	222,879	234,704	265,469	239,586	247,490
Water Loss % of Pumped	9.23%	9.75%	11.18%	10.45%	10.52%

Statistics for an Average Class C Water Utility (1,000 gallons)

	2001	2002	2003	2004	2005
Water Pumped	243,576	243,052	239,686	235,944	250,129
Water Sold	206,156	205,641	202,270	199,172	212,803
Unmetered Utility Use	7,501	7,920	7,804	7,808	6,654
Unmetered Utility Defects	6,364	4,540	5,698	5,043	4,973
Unmetered Nonutility Use	1,188	1,516	1,063	1,198	1,408
Total Non Metered Use	10,996	10,743	11,345	11,538	10,570
Not Metered % of Sold	5.33%	5.22%	5.61%	5.79%	4.97%
Water Loss	26,424	26,668	26,071	25,235	26,755
Water Loss % of Pumped	10.85%	10.97%	10.88%	10.70%	10.70%

Statistics for an Average Class D Water Utility (1,000 gallons)

	2001	2002	2003	2004	2005
Water Pumped	44,103	44,266	41,988	40,557	41,872
Water Sold	35,345	35,318	34,093	32,876	34,147
Unmetered Utility Use	1,540	1,811	1,508	1,531	1,245
Unmetered Utility Defects	1,609	1,340	1,488	1,436	1,763
Unmetered Nonutility Use	1,834	1,619	1,325	1,094	840
Total Non Metered Use	2,683	2,946	2,687	2,692	2,609
Not Metered % of Sold	7.59%	8.34%	7.88%	8.19%	7.64%
Water Loss	6,075	6,002	5,208	4,990	5,116
Water Loss % of Pumped	13.77%	13.56%	12.40%	12.30%	12.22%

In 2005, Wisconsin municipal water utilities pumped 216,329,367,000 gallons for a 3.5 % increase in water pumped in 2004. Wisconsin utilities sold 184,772,497,000 gallons of water. They sold 85% of the water they pumped in 2005. Of the remaining 31,556,870,000 gallons not sold, 23,187,136,000 gallons were unaccounted for and amount to 10.72% of production. From the above tables it can be seen that Class AB utility water loss has varied somewhat, going from 9.2% to 11% to 10.5%, Class C utility water loss is stable around 11%, and Class D water loss is trending downward, going from 13.8% to 12.2%.

The PSC views water loss as an indicator of efficiency and management. Our first cut at the data is to look closer at those utilities whose volume of water sold is less than 70% of the volume of water pumped. When a utility water loss is above 15% for Class AB water utilities or 25% for Class C & D utilities, we contact the utility about improving their unaccounted for water. We suggest each utility look at its numbers reported in the annual report and compare these with the water industry averages in Wisconsin.

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